

REMARKS

In the Official Action, the Examiner rejected claims 1, 2, and 4-10, and 12-25. The Examiner allowed claim 26. Further, the Examiner objected to claim 11. By way of this paper, Applicants added new claim 28, which incorporates allowable subject matter previously recited in claims 1, 10, and 11. Claims 1 and 20 have been amended. Claims 10, 11, and 15 have been cancelled. Reconsideration of the application is respectfully requested.

Allowable Subject Matter

Applicants gratefully acknowledge the Examiner's recognition of allowable subject matter. In the Office Action, the Examiner indicated that claim 26 was allowed. The Examiner further indicated that dependent claim 11 included allowable subject matter and, thus, would be allowable if rewritten in independent form. Although, as discussed below, Applicants do not agree with the present rejections, new claim 28 has been added to incorporate allowable subject matter previously recited in claims 1, 10 and 11. Accordingly, Claims 10 and 11 have been cancelled. Applicants respectfully submit that claim 28 is currently in condition for allowance.

Rejections under 35 U.S.C. § 103

The Examiner rejected claims 1, 2, 4-10 and 12-25 under 35 U.S.C. § 103(a) as being unpatentable over Shih et al. (U.S. Pat. No. 6,405,362) in view of Mills et al. (U.S. Pat. No. 6,353,870). Applicants respectfully traverse these rejections. Specifically, with regard to the independent claims, the Examiner stated:

Regarding claim 1, Shih teaches a method comprising:

coupling an option pack [Compact Flash, PCMCIA memory card or other removable computer readable medium] to a main unit [Palm-size PC, column 6, lines 43-46],

the option pack comprising a first memory device configured to store one or more applications and drivers associated with the one or more applications [column 6, lines 9-20],

the main unit comprising a device manager [operating system, column 6, lines 20-25], a power supply and a third memory [column 4, lines 49-51 and Figure 1]; and

downloading the one or more applications and associated drivers from the first memory device to the third memory device [column 7, lines 20-23 and lines 55-61].

Shih does not explicitly specifically disclose a second memory device on the option pack that stores card identification data and is different from the first memory device. Shih does state that the option pack may be any well known removable computer medium [column 6, lines 43-46]. Mills discloses a known MultiMediaCard, which includes a first memory for storing application data [Memory Core in Figure 3A] and a second memory, which is different from the first memory, that stores card identification data [CID and CSD in Figures 3A and 3B]. Mills discloses that the CID and CSD registers contain information that is needed for the card to interface with host computers [Figure 3B].

It would have been obvious to one of ordinary skill in the art to use the Mills MultiMediaCard as the removable computer medium disclosed by Shih as it is a known removable computer medium capable of fulfilling Shih's goal of providing additional functionality to a palm-size PC.

Office Action mailed April 11, 2005, pp. 2-3.

Regarding claim 20, Shih teaches a method of connecting an option pack to a main unit comprising:

powering on the main unit and determining if there is an option pack coupled to the main unit [column 6, lines 41-51 and column 8, lines 10-18];

providing an interrupt signal from the option pack to the main unit, interrupting the processing of the main unit and notifying the main unit that the option pack is present [column 6, lines 32-40 and 42-46]; and

downloading one or more software applications and associated drivers from the option pack to the main unit [column 7, lines 20-23 and 55-61].

Shih does not explicitly specifically disclose a second memory device on the option pack that stores card identification data and is different from the first memory device. Shih does state that the option pack may be any well known removable computer medium [column 6, lines 43-46]. Mills discloses a known MultiMediaCard, which includes a first memory for storing application data [Memory Core in Figure 3A] and a second memory, which is different from the first memory, that stores card identification data [CID and CSD in Figures 3A and 3B]. Mills discloses that the CID and CSD registers contain information that is needed for the card to interface with host computers [Figure 3B].

It would have been obvious to one of ordinary skill in the art to use the Mills MultiMediaCard as the removable computer medium disclosed by Shih as it is a known removable computer medium capable of fulfilling Shih's goal of providing additional functionality to a palm-size PC.

Office Action mailed April 11, 2005, pp. 5-6.

Applicants respectfully submit that the cited references do not contain all of the elements of the amended claims in the instant application, either alone or in combination, as discussed below. Furthermore, the references cited by the Examiner in support of "well known" facts do not obviate the deficiencies of the cited references.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination or modification. *See ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985).

Neither Shih nor Mills, Alone or in Combination, Disclose All Elements of Amended Claims 1 and 20.

The present application is generally directed to techniques that allow for a partial powering of an option pack when it is first connected to a main unit, to allow the main unit to download identification information. *See* specification, p. 23, ll. 7-9. The purpose of this is to allow the main unit to determine whether there is sufficient power to operate the option pack without draining the batteries of the main unit by fully powering the option pack upon insertion. *See id.* p. 23, ll. 11-15. To accomplish this, the option pack has two separate memories, each with a separate communications interface to the main unit. *See id.*, p. 10, ll. 5-10. Accordingly, amended independent claims 1 and 20

each recite transmitting identification data from the option pack to the main unit “before the option pack is fully powered.”

In contrast, Shih does not disclose partially powering an option pack, much less transmitting identification data before fully powering the option pack. To the contrary, the Shih reference discloses that insertion of a memory device carrying a program will trigger an event signal that is sent from the operating system to the shell program. Shih, col. 6, ll. 32-37. However, in the series of events that follow the insertion of a card, no partial powering of the inserted device is disclosed by Shih. *See id.*, col. 6, l. 56-col. 7, l. 18. In fact, the activities disclosed for the operation in Shih imply that the main device has full access to the memory in the inserted device. “In response to an insertion message, event monitor 210 searches the computer-readable medium that was just inserted for an ‘autorun’ program 15.” *Id.* col.6, ll. 55-59. Shih further indicates that the unit has full access to the contents of the memory card by noting that “[e]ach version of the [autorun] program is for a particular system and/or CPU and is located in a sub-directory of the file system on the computer-readable medium containing programs and files for the particular system and/or CPU.” *Id.* col.6, ll. 62-67. Thus, the memory card is fully powered upon insertion into the main device, in order to allow the appropriate autorun programs to be found. For at least these reasons, Shih does not disclose each of the elements recited in independent claims 1 or 20. Further, as discussed below, the Mills reference does not obviate this deficiency.

Neither the Mills reference, nor the secondary supporting reference cited by the Examiner, THE MULTIMEDIACARD SYSTEM SUMMARY VERSION 2.0 [hereinafter MMC Summary], alone or in combination, obviate the deficiencies of the Shih reference. As explicitly stated in the Mills reference, “Figs. 3A and 3B represent the prior art internal architecture of a generic MultiMediaCard and its registers.” Col. 2, lines 3-5. Fig. 3A is a functional block diagram of the MultiMediaCard which illustrates a number of logical components, such as a memory core, memory core interface, card interface controller and a number of registers. Fig. 3B provides a legend describing the registers illustrated in Fig. 3A. At no point in the Mills reference does it disclose a partial powering of the MultiMediaCard, either to access the identity information or for any other purpose. Additionally, the MMC Summary does not disclose any ability to partially power a MultiMediaCard. In fact, the reference implies that the entire card is initialized at once: “[a]fter a power-on reset, the host must initialize the cards by a special message-based MultiMediaCard bus protocol.” MMC Summary, p. 13. As shown in fig. 4 and table 1, there are only single power and communication contacts on the cards,

which would not allow communicating with separate parts of the card. *See id.* Thus, the MultiMediaCard is clearly fully powered upon insertion into the main unit.

Accordingly, Applicants respectfully assert that neither Mills nor the MMC Summary, alone or in combination with Shih, obviate the previous discussed deficiencies of Shih. For this reason, Applicants respectfully request withdrawal of the foregoing combinations and the corresponding rejections under 35 U.S.C. § 103, and allowance of independent claim 1, and its depending claims.

The References Cited in Support of “Well Known” Facts do not Obviate the Deficiencies of Shih and Mills.

Applicants also respectfully assert that the additional references cited by the Examiner in support of allegedly “notoriously well known” facts, Yamagata (U.S. Patent No. 6,609,072), Hayasaka (U.S. Patent No. 5,845,142), and Otsuka et al (U.S. Patent No. 6,201,701), do not obviate the previously discussed deficiencies of the Shih, Mills, and MMC Summary references, either alone or in combination, as discussed below. Additionally, no suggestion to combine these references with the previously discussed references can be found in any of the cited references.

Yamagata is cited by the Examiner as an example of “a method of determining whether a battery has enough remaining capacity to carry out an input or output of data and allowing the input or output of data execute if the remaining capacity is sufficient.” Office Action mailed April 4, 2005, p. 8-9. However, no partial powering of a newly attached device is disclosed in the Yamagata reference. Further, the Yamagata reference is directed to stopping the communication function of a terminal device if the battery powering the terminal device drops below a certain level. The Yamagata reference does not disclose checking the available power on the terminal device before allowing the terminal device to power another device (such as an option pack) being plugged into the terminal device. Thus, the Yamagata reference does not disclose the elements necessary to support the Examiner’s rejection based on the Shih reference. Further, Applicants submit that neither of the references provides a motivation to combine the references in the manner recited in the present claims.

Hayasaka is cited by the Examiner as an example of “comparing a residual battery capacity with a power necessary for communication and allowing the communication if the battery capacity

is high enough.” Office Action mailed April 4, 2005, p. 8-9. Hayasaka discloses powering down units irrelevant to the operation involved to allow more power to be used for the operation. *See* Hayaska, col. 1, ll. 46-col. 2, ll. 9. However, Hayasaka does not disclose partially powering up a newly attached option pack to determine its power requirements prior to fully powering the option pack. Further, Applicants submit that neither of the references provides a motivation to combine the references in the manner recited in the present claims.

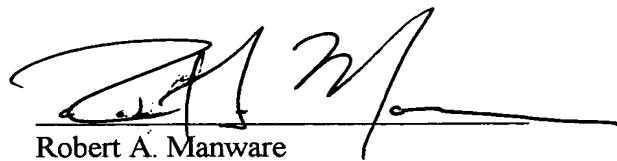
Finally, Otsuka is cited by the Examiner as an example of “verifying that a disk has enough memory capacity to store all data to be downloaded before downloading the data from another memory.” Office Action mailed April 4, 2005, p. 9. Otsuka discloses a system for obtaining a recording medium from a remote terminal. *See* Otsuka, col. 1, l. 66-col. 2, l. 6. Applicants respectfully submit that there is motivation in Otsuka or the Shih reference for combining these disparate teachings for use in a PDA, or other portable terminal, in the manner recited in the present claims.

For the reasons stated above, Applicants respectfully assert that none of the references cited by the Examiner, Shih, Mills, MMC Summary, Yamagata, Hatasaka or Otsuka, alone or in combination, disclose the recited elements of the amended independent claims 1 and 20. For these reasons, the Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 103, and allowance of these claims and their depending claims.

Conclusion

In view of the remarks set forth above, Applicants respectfully request allowance of claims 1, 2, 4-9, 12-14, 16-26 and 28. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone listed below.

Respectfully submitted,



Date: July 11, 2005

Robert A. Manware
Reg. No. 48,758
(281) 970-4545

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 8-527-2400